CONDITION

Melasma

Melasma causes flat brown or gray-brown patches of extra pigment, usually on the face

WHAT IT IS
Acquired patches of excess skin pigment

BODY SYSTEM
Skin

MAIN SYMPTOMS
Brown or gray patches, facial discoloration, uneven skin tone

WHAT CAUSES IT
Sunlight, hormones, and inherited susceptibility

HOW IT IS DIAGNOSED
Skin examination, sometimes dermoscopy or biopsy

MAIN TREATMENT
Light protection and pigment-reducing skin treatments

CAN IT BE CURED?
Sometimes - fades when triggers end

IS IT AN EMERGENCY?
No - melasma itself is not dangerous

LONG-TERM OUTLOOK
Often persistent, manageable, and prone to return

Overview

Melasma is a common skin condition that causes flat patches of darker color. These patches are usually brown, gray-brown, or tan and most often appear on the face.

The color comes from increased melanin, the pigment that gives skin, hair, and eyes their color. In melasma, pigment-producing cells called melanocytes become overactive. The number of these cells may not increase, but they make and distribute more pigment.

Melasma is not an infection, allergy, or form of skin cancer. It is not contagious. It usually does not affect physical health, but visible changes can affect confidence, mood, and social life.

Sunlight and visible light can make melasma darker. Hormonal changes, particularly during pregnancy, can also trigger it. Melasma may fade, but it often lasts for months or years and can return after treatment.

Symptoms

Melasma causes areas of color that are darker than your usual skin tone. The patches commonly appear on both sides of the face in a roughly matching pattern.

Common locations include:

Less often, patches appear on the neck or sun-exposed forearms.

The borders may be irregular, but the skin surface stays smooth. Melasma does not usually cause pain, swelling, scaling, or itching. If a dark area is raised, sore, bleeding, crusted, or changing quickly, it may have another cause.

Melasma can affect any skin tone. It is more noticeable and may be more persistent in people whose skin naturally produces more pigment.

Other conditions can look similar. These include freckles, sun spots, pigment left after acne or eczema, and reactions to medicines or skin products. A new or unusual patch should not automatically be assumed to be melasma.

- Cheeks and cheekbones
- Forehead
- Upper lip
- Nose
- Chin and jawline

Causes and risk factors

Melasma develops when pigment-producing cells respond too strongly to certain triggers. There is usually no single cause.

Ultraviolet radiation from the sun is a major trigger. UVA and UVB rays can both stimulate pigment production. Visible light, including part of ordinary daylight, can also worsen melasma, especially in darker skin tones. Heat may be a trigger for some people, although the evidence is less clear than it is for light.

Hormones help explain why melasma often begins during pregnancy. It is sometimes called the "mask of pregnancy." Hormonal contraception and hormone therapy may also trigger or worsen it, although many people use these medicines without developing melasma.

Family history matters. You may be more likely to develop melasma if close relatives have it. This reflects an inherited susceptibility rather than a condition directly passed down in a simple

pattern.

Other possible contributors include skin irritation, some medicines that increase sensitivity to light, and cosmetics that irritate the skin. Irritation can itself stimulate extra pigment, so harsh treatments may make the discoloration worse.

Diagnosis

Melasma is usually diagnosed by examining your skin and asking how the patches developed. The pattern, color, location, and symmetry often provide enough information.

A clinician may use a dermatoscope, a handheld magnifying tool with a light, to examine the pigment more closely. A Wood's lamp uses ultraviolet light to highlight some pigment patterns. These tools can support the diagnosis, but they do not always show exactly how deep the pigment sits.

A skin biopsy is rarely needed. During a biopsy, a small sample of skin is removed and examined under a microscope. This may be considered when the appearance is unusual or another condition needs to be ruled out.

It can also be useful to review medicines, hormonal treatments, pregnancy history, skin products, and sun exposure. Blood tests are not routinely needed to confirm typical melasma.

Treatment and management

Treatment aims to fade the patches, prevent further darkening, and reduce recurrences. Improvement is usually gradual. No treatment can guarantee that melasma will disappear permanently.

Daily light protection is the foundation of management. Use a broad-spectrum sunscreen that protects against UVA and UVB and has an SPF of at least 30. Tinted sunscreen containing iron oxides can provide added protection against visible light. A wide-brimmed hat and shade also help. Sunscreen needs to be applied generously and reapplied as directed on the label, especially after sweating or swimming.

Several skin treatments can reduce pigment. The most suitable choice depends on your skin, other health factors, pregnancy plans, previous treatment, and local availability.

Options may include:

These products can cause dryness, stinging, redness, or irritation. More irritation does not mean better results. It can deepen discoloration, particularly in skin that develops pigment

easily.

Long-term or unmonitored hydroquinone use can rarely cause ochronosis, a difficult-to-treat blue-black discoloration. Combination creams containing a corticosteroid can also cause problems if used longer than intended. Medical supervision helps limit these risks.

Tranexamic acid is sometimes used for difficult melasma as a cream or an oral medicine. Oral tranexamic acid is an off-label treatment, meaning it is not specifically approved for melasma. It can increase the risk of blood clots in some people, so it requires careful medical screening and monitoring.

Chemical peels, microneedling, lasers, and light-based procedures may help selected people. They can also cause burns, increased pigment, pale spots, or rebound melasma. These procedures are best performed by someone experienced in treating melasma across different skin tones.

Pregnancy changes the treatment choices. Topical retinoids are avoided during pregnancy, and hydroquinone is generally avoided because substantial amounts can be absorbed and pregnancy safety information is limited. If you are pregnant, breastfeeding, or trying to conceive, check whether a product is suitable before using it.

- Hydroquinone , which reduces pigment production and is commonly used for limited treatment periods
- Retinoids , such as tretinoin, which support skin-cell turnover
- Azelaic acid , which can reduce pigment and may also help acne
- Combination creams containing hydroquinone, tretinoin, and a mild corticosteroid like prednisone or hydrocortisone
- Other topical ingredients, such as cysteamine or kojic acid

Complications

Melasma does not damage internal organs and does not turn into skin cancer. Its main impact is often emotional rather than physical. Some people feel self-conscious, avoid photographs or social situations, or spend considerable time and money trying to cover the patches.

Treatment can cause complications. Irritant dermatitis makes skin red, dry, itchy, or sore. Inflammation from a strong product or procedure can lead to post-inflammatory hyperpigmentation, meaning extra pigment left after the skin heals.

Rarely, inappropriate long-term hydroquinone use causes ochronosis. Lasers and peels can produce scarring or lasting color changes if the treatment is too aggressive.

A changing skin lesion should still be assessed. Melasma itself may be harmless, but not every brown patch is melasma.

Prevention

Melasma cannot always be prevented. Inherited susceptibility and hormonal changes, including pregnancy, are not fully controllable.

You can reduce light-related triggering by using broad-spectrum sunscreen every day, choosing a tinted product with iron oxides, wearing a hat, and seeking shade during strong sunlight. Protection remains useful on cloudy days and near windows because some light still reaches the skin.

Avoiding unnecessary irritation may also help. Introduce active skin products carefully, follow their instructions, and stop if they cause persistent burning or inflammation. Do not apply household acids, bleach, or undiluted lemon juice to the skin.

You should not stop prescribed contraception, hormone therapy, or another medicine solely because of melasma. If the timing suggests a medicine may be contributing, discuss its benefits and alternatives with the prescriber.

Living with it and what to expect

Melasma often changes with the seasons. It may darken during sunny months and fade when light exposure decreases. Even brief, repeated exposure can maintain the pigment, so light protection is usually needed throughout the year.

Treatment tends to work slowly. Some improvement may appear after several weeks, but clearer change often takes months. Pigment closer to the skin surface usually responds more readily than pigment located deeper in the skin.

Melasma that begins during pregnancy may fade after delivery as hormone levels settle. This can take months, and some patches remain. Melasma linked with hormonal medicines may improve after the trigger ends, but this is not guaranteed.

Recurrence is common. After the patches fade, many people continue light protection and a gentler maintenance plan. Repeated intensive treatment without maintenance may lead to a cycle of improvement, irritation, and darkening.

Cosmetic camouflage can be useful while treatment takes effect or if you prefer not to pursue medical treatment. Tinted sunscreen, concealer, and color-correcting products do not worsen

melasma when they are non-irritating and removed gently.

Most people with melasma continue their normal activities without physical limits. Choosing not to treat it is also reasonable if the appearance does not bother you.

When to get medical help

Arrange a routine appointment if you are unsure whether the discoloration is melasma, if it is spreading despite careful light protection, or if it affects your wellbeing. Medical advice is also useful before using prescription-strength products or procedures.

Seek a prompt assessment if a patch:

These features are not typical of melasma and may have another explanation.

Melasma itself is not an emergency. Get emergency help for signs of a severe reaction to a skin product, such as trouble breathing or sudden swelling of the lips, tongue, face, or throat.

- Becomes raised, painful, crusted, or persistently itchy
- Bleeds, forms an open sore, or changes quickly
- Looks very different from your other patches
- Develops after starting a medicine that also causes a rash or light sensitivity

Common questions

Is melasma permanent?

Not always. Some cases fade when a trigger, such as pregnancy, ends. Other cases last for years or repeatedly return. Light protection and maintenance treatment can help keep the color less noticeable.

Will melasma go away after pregnancy?

It may gradually fade after delivery, but this is not certain. Hormones take time to settle, and light exposure can keep the pigment active. Treatment options can be reviewed after pregnancy, taking breastfeeding into account.

Is melasma a type of skin cancer?

No. Melasma is an increase in pigment and does not become cancer. However, a single changing, bleeding, raised, or irregular spot should be checked rather than assumed to be melasma.

What is the difference between melasma and sun spots?

Melasma usually forms larger, irregular patches on both sides of the face and is influenced by hormones and light. Sun spots are often smaller, separate marks that develop after years of sun exposure. An examination can help distinguish them.

Can I treat melasma at home?

Daily sunscreen, hats, shade, gentle skin care, and cosmetic camouflage can be used at home. Pigment-reducing products need careful selection because irritation can worsen melasma. Strong peels and unregulated bleaching products carry greater risks.

Why does my melasma get darker in summer?

Longer and stronger exposure to ultraviolet and visible light stimulates pigment-producing cells. Consistent sunscreen, tinted visible-light protection, shade, and a hat can reduce seasonal darkening.

Sources

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